

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Zhaoda Zhang et al. Art Unit : Unknown
Serial No. : Examiner : Unknown
Filed : February 25, 2004
Title : PEPTIDE-BASED MULTIMERIC TARGETED CONTRAST AGENTS

Mail Stop Patent Application

Commissioner for Patents
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INFORMATION DISCLOSURE STATEMENT

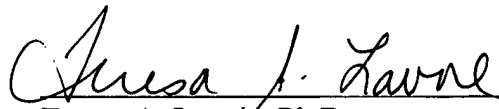
Applicant submits the references listed on the attached form PTO-1449.

Under 35 USC §120, this application relies on the earlier filing date of application serial number 10/209,183, filed on July 30, 2002. The references were submitted to and/or cited by the Office in the prior application and, therefore, are not provided in this application.

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Respectfully submitted,

Date: 2/24/04


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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 13498-010003	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Zhaoda Zhang et al.	
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U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	08/875,365					12/12/97
	AB	4,659,839	04/21/87	Nicolotti et al.			
	AC	4,678,667	07/07/87	Meares et al.			
	AD	4,880,008	11/14/89	Lauffer			
	AE	4,897,255	01/30/90	Fritzberg et al.			
	AF	5,637,759	06/10/97	Hearst et al.			
	AG	5,641,878	06/24/97	Dandliker et al.			
	AH	6,517,814	02/11/03	Liu			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AI	0 515 313 B1	08/09/00	EPO				
	AJ	WO 93/17719	09/16/93	PCT				
	AK	WO 95/19187	07/20/95	PCT				
	AL	WO 96/23524	08/08/96	PCT				
	AM	WO 96/23526	08/08/96	PCT				
	AN	WO 97/13490	04/17/97	PCT			Abstr.	
	AO	WO 01/08712	02/08/01	PCT				
	AP	WO 01/09188	02/08/01	PCT				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AQ	Aime et al., "Synthesis, Characterization, and $1/T_1$ NMRD Profiles of Gadolinium(III) Complexes of Monoamide Derivatives of DOTA-like Ligands. X-ray Structure of the 10-[2-[[[2-Hydroxy-1-(hydroxymethyl)ethyl]amino]-1-[(phenylmethoxy)methyl]-2-oxo-ethyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triacetic Acid-Gadolinium(III) Complex," <u>Inorg. Chem.</u> , 1992, 31:2422-2428
	AR	Aime et al., "Multinuclear and multifrequency NMR study of gadolinium(III) complexes with bis-amide derivatives of ethylenedioxydiethylene-dinitrilotetraacetic acid," <u>J. Chem. Soc. Dalton Trans.</u> , 2000, pp. 3435-3440

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	AS	Amedeo Jr. et al., "A Practical Manufacturing Synthesis of 1-(R)-Hydroxymethyl-DTPA: An Important Intermediate in the Synthesis of MRI Contrast Agents," <u>Synthetic Communications</u> , 1999, 29(14):2377-2391
	AT	Amedeo Jr. et al., "Preparation of N,N-BIS[2-[N',N'-BBIS[(Tert-Butoxycarbonyl)Methyl]-Amino]Ethyl-L-Aspartic Acid: An Intermediate in the Synthesis of MRI Contrast Agents," <u>Synthetic Communications</u> , 2000, 30(20):3755-3763
	AU	Augustijns et al., "Peptidyl Dipeptidase A-Catalyzed Metabolism of Delta Sleep-Inducing Peptide in Bovine Brain Microvessel Endothelial Cells: A Cell Culture Model of the Blood Brain Barrier," <u>Biochem. Biophys. Res. Comm.</u> , 1995, 210(3):987-994
	AV	Bakker et al., "In Vivo Application of [¹¹¹ In-DTPA-D-PHE ¹]-Octreotide for Detection of Somatostatin Receptor-Positive Tumors in Rats," <u>Life Sciences</u> , 1991, 49:1593-1601
	AW	Bligh et al., "Neutral Gadolinium(III) Complexes of Bulky Octadentate dtpa Derivatives as Potential Contrast Agents for Magnetic Resonance Imaging," <u>Polyhedron</u> , 1995, 14(4):567-569
	AX	Bulte et al., "Dysproium-DOTA-PAMAM Dendrimers as Macromolecular T2 Contrast Agents," <u>Invest. Radiol.</u> , 1998, 33(11):841-845
	AY	Caravan et al., "Gadolinium(III) Chelates as MRI Contrast Agents: Structure, Dynamics, and Applications," <u>Chem. Rev.</u> , 1999, 99:2293-2352
	AZ	Collen et al., "Thrombolysis with Human Extrinsic (Tissue-Type) Plasminogen Activator in Rabbits with Experimental Jugular Vein Thrombosis," <u>J. Clin. Invest.</u> , 1983, 71:368-376
	AAA	Deacon et al., "Degradation of Glucagon-Like Peptide-1 by Human Plasma <i>in Vitro</i> Yields an N-Terminally Truncated Peptide That Is a Major Endogenous Metabolite <i>in Vivo</i> ," <u>J. Clin. Endocrinol.</u> , 1995, 80(3):952-957
	ABB	Kellar et al., "Magnetic Field Dependence of Solvent Proton Relaxation by Solute Dysprosium(III) Complexes," <u>Invest. Radiol.</u> , 1998, 33(11):835-840
	ACC	Kojima et al., "Bioimaging of Nitric Oxide with Fluorescent Indicators Based on the Rhodamine Chromophore," <u>Anal. Chem.</u> , 2001, 73:1967-1973
	ADD	Kolc, "Amino Acids and Peptides. LXXXIX. Synthesis of L-4-Azalysine, D-4-Azalysine, and L-4-Analysine-[6- ¹⁴ C]," <u>Coll. Czech. Chem. Commun.</u> , 1969, 34:630-634
	AEE	Konings et al., "Gadolinium Complexation by a New DTPA-Amide Ligand. Amide Oxygen Coordination," <u>Inorg. Chem.</u> , 1990, 29:1488-1491
	AFF	Krieter et al., "In Vivo Metabolism of Atrial Natriuretic Peptide: Identification of Plasma Metabolites and Enzymes Responsible for Their Generation," <u>J. Pharmacol. Exp. Ther.</u> , 1989, 249(2):411-417
	AGG	Lauffer, "Paramagnetic Metal Complexes as Water Proton Relaxation Agents for NMR Imaging: Theory and Design," <u>Chem. Rev.</u> , 1987, 87:901-927
	AHH	Liu et al., "Labeling a Hydrazino Nicotinamide-Modified Cyclic Iib/IIla Receptor Antagonist with ^{99m} Tc Using Aminocarboxylates as Coligands," <u>Bioconjugate Chem.</u> , 1996, 7:63-71
	AII	Martin et al., "Gadolinium(III) Di- and Tetrachelates Designed for <i>in Vivo</i> Noncovalent Complexation with Plasma Proteins: A Novel Molecular Design for Blood Pool MRI Contrast Enhancing Agents," <u>Bioconjugate Chem.</u> , 1995, 6:616-623
	AJJ	Mühler and Hochhaus, "Metabolism of Dynorphin A 1-13 in Human Blood and Plasma," <u>Pharm. Res.</u> , 1995, 12(8):1165-1170

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	AKK	Mühler et al., "Interspecies comparison of <i>in vitro</i> plasma degradation of dynorphin A 1-13," <u>Pharmazie</u> , 1996, 51(8):581-585
	ALL	Muller et al., "Physicochemical Characterization of MS-325, a New Gadolinium Complex, by Multinuclear Relaxometry," <u>Eur. J. Inorg. Chem.</u> , 1999, pp. 1949-1955
	AMM	Mühler et al., "Assessment of Complex Peptide Degradation Pathways via Structured Multicompartmental Modeling Approaches: The Metabolism of Dynorphin A1-13 and Related Fragments in Human Plasma," <u>J. Pharm. Sci.</u> , 1999, 88(9):938-944
	ANN	Murphey et al., "Metabolism of Bradykinin in Vivo in Humans: Identification of BK1-5 as a Stable Plasma Peptide Metabolite," <u>J. Pharmacol. Exp. Ther.</u> , 2000, 294:263-269
	AOO	Murru et al., "Luminescence Behaviour of Stable Europium and Terbium Complexes of Tetraaza Phosphinates: Efficient Through-space Energy Transfer from Phenyl to Terbium," <u>J. Chem. Soc. Chem. Commun.</u> , 1993, pp. 1116-1118
	APP	Muto et al., "Detecting Deep Venous Thrombosis with Technetium-99m-Labeled Synthetic Peptide P280," <u>J. Nucl. Med.</u> , 1995, 36(8):1384-1391
	AQQ	Oefner et al., "High-Resolution Liquid Chromatography of Fluorescent Dye-Labeled Nucleic Acids," <u>Analytical Biochem.</u> , 1994, 223:39-46
	ARR	Pearson et al., "Somatostatin Receptor-Binding Peptides Labeled with Technetium-99m: Chemistry and Initial Biological Studies," <u>J. Med. Chem.</u> , 1996, 39:1361-1371
	ASS	Powell et al. "Peptide Stability in Drug Development. II. Effect of Single Amino Acid Substitution and Glycosylation on Peptide Reactivity in Human Serum," <u>Pharm. Res.</u> , 1993, 10(9):1268-1273
	ATT	Powell et al., "Structural and Dynamic Parameters Obtained from ¹⁷ O NMR, EPR, and NMRD Studies of Monomeric and Dimeric Gd ³⁺ Complexes of Interest in Magnetic Resonance Imaging: An Integrated and Theoretically Self-Consistent Approach," <u>J. Am. Chem. Soc.</u> , 1996, 118:9333-9346
	AUU	Ramachandran et al., "New Multimeric Magnetic Resonance Imaging Agents," <u>Invest. Radiol.</u> , 1998, 33(11):779-797
	AVV	Reubi et al., "Unsulfated DTPA- and DOTA-CCK analogs as specific high-affinity ligands for CCK-B receptor-expressing human and rat tissues in vitro and in vivo," <u>Eur. J. Nucl. Med.</u> , 1998, 25(5):481-490
	AWW	Solomon et al., "Focal Infection Imaging Using an In-111 Labeled Antagonist Chemotactic Peptide," <u>J. Nucl. Med.</u> , 1994, 35(5):45P, Abstract No. 172
	AXX	Stall et al., "Rearrangement and expression of endogenous immunoglobulin genes occur in many murine B cells expressing transgenic membrane IgM," <u>Proc. Natl. Acad. Sci. USA</u> , 1988, 85:3546-3550
	AYY	Tóth et al., "The Role of Water Exchange in Attaining Maximum Relaxivities for Dendrimeric MRI Contrast Agents," <u>Chem. Eur. J.</u> , 1996, 2(12):1607-1615
	AZZ	Tóth et al. "Tuning water-exchange rates on (carboxymethyl)iminobis-(ethylenetrinitrilo)tetraacetate (dtpa)-type gadolinium(III) complexes," <u>J. Chem. Soc., Dalton Trans.</u> , 1997, pp. 1587-1594
	AAAA	Tóth et al., "Direct assessment of water exchange on a Gd(III) chelate bound to a protein," <u>J. Biol. Inorg. Chem.</u> , 1998, 3:606-613

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	ABBB	Uggeri et al., "Novel Contrast Agents for Magnetic Resonance Imaging. Synthesis and Characterization of the Ligand BOPTA and Its Ln(III) Complexes (Ln = Gd, La, Lu). X-ray Structure of Disodium (<i>TPS-9-145337286-C-S</i>)-[4-Carboxy-5,8,11-tris(carboxymethyl)-1-phenyl-2-oxa-5,8,11-triazatridecan-13-oato(5-)]gadolate(2-) in a Mixture with Its Enantiomer," <u>Inorg. Chem.</u> , 1995, 34:633-642
	ACCC	Weinmann et al. "A New Lipophilic Gadolinium Chelate as a Tissue-Specific Contrast Medium for MRI," <u>Magn. Reson. Med.</u> , 1991, 22:233-237
	ADDD	Wettergren et al. "Amidated and non-amidated glucagon-like peptide-1 (GLP-1): non-pancreatic effects (cephalic phase acid secretion) and stability in plasma in humans," <u>Reg. Peptides</u> , 1998, 77:83-87
	AEEE	Zhao et al., "Oxidation of Primary Alcohols to Carboxylic Acids with Sodium Chlorite Catalyzed by TEMPO and Bleach," <u>J. Org. Chem.</u> , 1999, 64:2564-2566

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